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ABSTRACT

The report summarizes findings from a needs assessment survey of 16 precollege schools and programs to assess needs in the field of education. Four areas of service which precollege programs could provide were identified: curriculum development, materials development, technical assistance, and inservice training. Among findings were that parent-child programs at the preschool to eighth grade level was the option selected as the highest curriculum development need area. Appendixes, which make up most of the report, contain stimulus questions to respondents, invitation letters, needs assessment/affiliated school program project interview protocol, and a table of recommended media formats for 86 materials development areas. (SB)

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Pre-College Programs

NEEDS ASSESSMENT SURVEY 1980

Gallaudet College

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PRE-COLLEGE PROGRAMS NEEDS ASSESSMENT SURVEY: 1980

by
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When the creation of the Pre-College Outreach Units was announced by Dr. Robert Davila, Vice President for MSSD/KDES, in 1978, a Pre-College Task Force representing the Kendall Demonstration Elementary School (KDES) and the Model Secondary School for the Deaf (MSSD) communities was established to provide advice regarding the role, function, and scope of the two units. From the deliberations of the Outreach Task Force came a very strong recommendation that Pre-College Programs assess needs in the field of education for the deaf. The data collected would be used to establish clear priorities for Outreach efforts and to guide the Pre-College Council's decisions regarding personnel and budget commitments to particular projects.

This report is a summary of the findings from a needs assessment survey conducted by the Pre-College Outreach Units as a response to the Task Force's recommendation. More detailed data are available for review from the Pre-College Outreach Units. The raw data file is available for parties interested in conducting additional analyses.

To address the needs assessment problem, a guiding principle was established by the needs assessment project team. This guiding principle, to design the needs assessment survey for pragmatic, not theoretical purposes, was the team's reference point. Every effort was made to obtain and report information which had direct decision-making relevance. There was no implied or expressed intent that the results of this needs assessment survey would reflect the universe of potential needs of schools and programs for hearing impaired students. Rather, the intent was to focus on the realistic capabilities of the Pre-College Programs to provide outreach services and to limit expression of needs to these areas of capability.

With this guiding principle as a base, the needs assessment team identified four areas of service which Pre-College Programs could provide: (1) curriculum development, (2) materials development, (3) technical assistance, and (4) inservice training. Definitions of each of these four areas of service were developed as follows:

> *Curriculum Development:* the identification and documentation of appropriate skills and knowledge that students should be taught in given academic areas.
>
> *Materials Development:* the design and production of classroom materials specially for use with hearing impaired students.
>
> *Technical Assistance:* long- or short-term consultative assistance to help schools or programs accomplish a project or develop a program.
>
> *Inservice Training:* Pre-College sponsored workshops, seminars, and conferences offered in cooperation with a host school.

With the four broad service areas identified, the needs assessment team delineated specific capabilities within each area. A review of the computer printouts of the BEH-funded national special education needs assessment provided a comprehensive list of curriculum and materials breakdowns. The BEH list was reviewed and compared with existing curriculum and materials capabilities within the Model Secondary School for the Deaf and the Kendall Demonstration Elementary School. In addition, an inventory of Pre-College personnel expertise was reviewed to identify areas in which technical assistance or inservice training might be developed. The

needs assessment team identified and interviewed key people within the Model Secondary School for the Deaf, Kendall Demonstration Elementary School, Special Schools of the Future staff, and the office of the Vice President for MSSD/KDES. These key people reviewed the draft list of specific capabilities. The addition of new items and deletion or clarification of items recommended by reviewers were integrated into the final list.

Concurrent with the identification of specific items within each of the four identified service areas, the needs assessment team established objectives for the data collection effort. Seven objectives were identified and stimulus questions directly related to each served as the basis for data collection. The following are the seven objectives:

1. to determine the availability of (a) curriculum development, (b) materials development, (c) technical assistance, and (d) inservice training within schools and programs for the hearing impaired;
2. to determine the extent to which existing services (other than those provided by Pre-College Programs) in (a) curriculum development, (b) materials development, (c) technical assistance, and (d) inservice training were meeting the needs of personnel within schools and programs for the hearing impaired;
3. to identify specific areas within the curriculum of schools and programs for the hearing impaired considered to be high priority for development;
4. to identify specific classroom materials which personnel in schools and programs for the hearing impaired considered of highest priority for development for use with hearing impaired students;
5. to identify technical assistance areas which personnel within schools and programs for hearing impaired students considered highest priority;
6. to identify inservice training topics considered of greatest need by personnel in schools and programs for hearing impaired students;
7. to obtain advice from experienced educators of the deaf on appropriate format for materials addressing particular content areas.

Using these objectives as a base, stimulus questions were developed. Appendix A of this report provides the questions as presented to respondents.

METHODOLOGY

Procedures for Selecting Participants

An administrative decision was made early in the project to focus data collection efforts in a geographical area proximal to Gallaudet College in order to reduce costs associated with the project and still permit person-to-person contact with respondents. There was general agreement that needs in one part of the country were not drastically different from other parts of the country.

Using the *American Annals of the Deaf Directory, 1979,* a list of state residential and large private schools plus large public school day programs was developed and approved by the Vice President for MSSD/KDES as appropriate programs to invite to participate in the study. A total of 16 programs accepted the invitation to become participating schools (see Appendix B for a copy of the invitation letter). Upon acceptance of the invitation, the administrative head of a school or program was asked to arrange for a number of personnel to be available on a specified visitation day for an hour interview. The criteria specified for selecting individuals to be interviewed were as follows:

a. the chief executive officer and administrators/supervisors of all major subcomponents of the program,
b. teachers with two or more years teaching experience in the program,
c. cross-representation of subcomponents of the program.

(A copy of the letter to school heads is in Appendix B.)

Procedures for the Conduct of Interviews

Hourly interviews with personnel from participating schools and programs were conducted on the scheduled visitation days. Two interviewers from Pre-College visited each site and interviewed between four and twelve people within each program, depending upon the size of the program. Interviews required between 30 minutes and an hour and were usually conducted in a room separate from the interviewees' work situation. Coffee and refreshments were available.

The interviews were structured, yet informal. Each of the stimulus questions for the needs assessment study was presented both orally and in the form of question-and-response "boards." At the beginning of the interview, and at relevant points during it,

interviewees were presented with cards which defined each of the four service areas being studied. This exercise was done to ensure that all individuals responded in terms of consistent definitions. Because numerous options were available in each of the four service areas and because individuals were permitted to select a limited number of those options, respondents had an opportunity to maneuver "markers" around the response boards until their final selections were made. Once interviewees had made their final selections, the interviewer recorded their responses on a data sheet.

At the conclusion of the formal data collection, a brief informal conversation from five to fifteen minutes occurred in which the personnel from the school could ask questions about Pre-College, suggest areas where Pre-College and their school or program might interact more effectively, and identify long- and short-range priorities within their school. (Appendix C provides a detailed description of the interview protocol, including a description of the introduction, purpose of the project, and procedures employed to set people at ease so that they could focus on the interview questions.)

It was the unanimous impression of interviewers that the data collection procedure was extremely effective. People being interviewed focused very intensely on the purpose of the questions and gave their responses careful attention and thought. Feedback from those who participated in the interviews was highly positive and reflected a willingness to participate in such efforts in the future. Most of the people interviewed expressed the desire for feedback on the results of the needs assessment study and, upon approval of the final report, an executive summary was distributed to all of those interviewed during the project.

RESULTS

Description of Respondents

A total of 16 schools and programs from Virginia, Maryland, West Virginia, Delaware, Pennsylvania, New Jersey, New Hampshire, Rhode Island, Ohio, and Massachusetts participated in the needs assessment survey. Table 1 lists the names of the participating programs and the number of personnel from each program interviewed for the study. Of the 16 programs, six (37.5%) were state residential programs, seven (43.75%) were local public school pro-

Table 1

Names of Participating Schools and Numbers of Personnel Interviewed

Participating Schools	*Number of Personnel*
Alexander Graham Bell School Columbus, Ohio	9
Arlington County Public Schools Arlington, Virginia	4
Bergen County Special Services School District Secondary Hearing Impaired Program Midland Park, New Jersey	8
Bruce Street School Newark, New Jersey	6
Fairfax County Public Schools Fairfax, Virginia	4
Manchester Regional Program for the Hearing Impaired Manchester, New Hampshire	5
Margaret S. Sterck School for the Hearing Impaired Newark, Delaware	7
Millburn School for the Hearing Handicapped Millburn, New Jersey	9
Pennsylvania School for the Deaf Philadelphia, Pennsylvania	10
Rhode Island School for the Deaf Providence, Rhode Island	5
Scranton State School for the Deaf Scranton, Pennsylvania	10
Special Services School District of Bergen County Program for the Hearing Impaired Washington School New Milford, New Jersey	6
St. Rita School for the Deaf Cincinnati, Ohio	8
Virginia School for the Deaf and the Blind Staunton, Virginia	8
West Virginia Schools for the Deaf and the Blind Romney, West Virginia	8

grams, and three (18.75%) were private schools (see Table 2). A total of 47 individuals from state residential schools were interviewed, 33 from local public schools, and 27 from private programs for a total of 107 interviews (see Table 3). Of the 107 individuals interviewed during the needs assessment survey, 34 (31.8%) were administrators, 57 (53.3%) were teachers, and 16 (15.0%) were professional support personnel, such as audiologists, psychologists, counselors, and curriculum specialists (see Table 4).

Availability and Quality of Services

Two of the objectives of the needs assessment survey were to determine the extent to which the Outreach service areas which Pre-College Programs have to offer are (a) available to other programs already and (b) meeting the needs of those programs. Respondents were asked to rate the availability of the four service areas on a continuum from "not available at all" to "full range of service available." Table 5 summarizes the results of the ratings of each of the four service areas. It should be noted that only one of the service areas—materials development—rated an average higher than the mid-range of availability. This seems to indicate that while some programs have the four service areas available to some extent, current services are not fully meeting the needs of individuals surveyed.

Table 6 summarizes the ratings of the appropriateness of services currently available to individuals within the surveyed schools. Respondents were asked to rate the available services on a continuum from "does not meet my needs at all" to "totally meets my needs." Individuals who had previously indicated that the service area was not available to them at all did not respond to this item. The average ratings of the four service areas suggest that the quality of service available in the four areas is not high in that none of the average ratings exceed even the mid-point rating of 3.0.

Based on the results reported in Tables 5 and 6, it seems clear that a need exists for more extensive and more appropriate kinds of service to schools and programs for hearing impaired students than exist currently from sources other than Pre-College Programs.

Table 2

Type of Programs Participating in the Needs Assessment Survey

Type of Program	*N*	*Percentage*
State Residential School	6	37.50
Local Public School	7	43.75
Private School	3	18.75
Total	16	100.00

Table 3

Number of Individuals Interviewed from Each of the Three Types of Participating Programs

Type of Program	*N*	*Percentage*
State Residential School	47	43.9
Local Public School	33	30.8
Private School	27	25.2
Total	107	100.0

Table 4

Organizational Roles of Participants

Role of Participant	*N*	*Percentage*
Administrators	34	31.8
Teachers	57	53.3
Professional Support Personnel	16	15.0
Total	107	100.0

Table 5

Ranking of the Degree of Availability of the Four Areas of Service Surveyed in the Needs Assessment Survey

	Rating of Availability										
	Not Available at All								*Full Range of Service Available*		
	1		*2*		*3*		*4*		*5*		
Service Area	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*Average Rating*
Curriculum Development	11	10.3	32	29.9	31	29.0	25	23.4	8	7.5	2.87
Materials Development	7	6.5	28	26.2	31	29.0	30	28.0	11	10.3	3.09
Technical Assistance	18	16.8	31	29.0	26	24.3	27	25.2	5	4.7	2.71
Inservice Training	14	13.1	26	24.3	32	29.9	27	25.2	8	7.5	2.90

Table 6

Ranking of the Appropriateness of Currently Available Services in the Four Areas Studied in the Needs Assessment Survey

	Rating of the Available Service										
	Does Not Meet Need At All								*Totally Meets Need*		
	1		*2*		*3*		*4*		*5*		
Service Area	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*Average Rating*
Curriculum Development	5	5.21	43	44.79	27	28.12	19	19.79	2	2.08	2.69
Materials Development	5	4.95	35	34.65	37	36.63	20	19.80	4	3.96	2.83
Technical Assistance	11	12.22	33	36.67	23	25.56	20	22.22	3	3.33	2.67
Inservice Training	10	10.75	29	31.18	35	37.63	16	17.20	3	3.23	2.71

Curriculum Development Needs

Tables 7 through 9 summarize findings related to the curriculum development needs identified by the 107 participants in the needs assessment survey. Respondents were asked to select five options from a list of 36 curriculum options: 18 options in the preschool to eighth grade category and 18 options in the ninth grade to twelfth grade category. Table 7 presents the number and percentage of the 107 participants who selected any one of the 36 options.

The following areas were the top five ranking curriculum areas:

1. Social-Emotional Development/Counseling at the preschool to eighth grade level;
2. Parent-Child Programs, preschool to eighth grade level;
*3. Language Arts, preschool to eighth grade level;
*4. Reading, preschool to eighth grade level;
5. Career Education, ninth to twelfth grade level.

*tied in rank

Table 7

Frequency and Percentage of Respondents Selecting Curriculum Development Needs Options as One of Their Five Priority Needs Areas. Ranks of Top Five Needs are Indicated.

	Preschool to Eighth Grade Level			*Ninth to Twelfth Grade Level*		
Curriculum need area	*Rank (only top 5)*	*Number of respondents selecting option as 1 of 5 highest*	*% of respondents selecting option as 1 of 5 highest*	*Rank (only top 5)*	*Number of respondents selecting option as 1 of 5 highest*	*% of respondents selecting option as 1 of 5 highest*
Auditory training		13	12.15		1	0.93
Career education		20	18.69	5	34	31.78
Cognitive development		24	22.43		11	10.28
Daily living skills		22	20.56		18	16.82
Fine arts/drama		7	6.54		3	2.80
Health and safety		4	3.74		7	6.54
Language arts	3.5*	39	36.45		10	9.35
Mathematics		8	7.48		6	5.61
Natural and physical science		6	5.61		4	3.74
Perceptual/Motor development		17	15.89		0	–
Physical education		3	2.80		1	0.93
Reading	3.5*	39	36.45		19	17.76
Residential/Dormitory programming		17	15.89		16	14.95
Sign language		6	5.61		7	6.54
Social-Emotional development/ counseling	1	54	50.47		28	26.17
Social science		7	6.54		2	1.87
Speech training		10	9.35		6	5.61
Parent/Child programs	2	50	46.73		16	14.95

*denotes ties in frequencies

In responding to the question on curriculum development needs, those interviewed were asked to rank their five choices of high priority needs. Table 8 presents the frequency and percentage of respondents who selected one of the 36 curriculum development need areas as their first and highest priority choice. Parent-child programs at the preschool to eighth grade level was the option selected as the highest priority by the greatest number of people. Second was language arts at the preschool to eighth grade level; perceptual-motor development and social-emotional development and counseling at the preschool to eighth grade level tied in third and fourth place in selection as highest priority. Residential/dormitory programming and health and safety at the ninth to twelfth grade level tied as the option selected as the highest priority in the fifth rank.

Table 8

Frequency and Percentage of Respondents Selecting Curriculum Development Needs Areas as *First* Choice. Ranks of Top Five Needs Areas are Indicated.

Highest Priority Curriculum Development Need Area	*N*	*%*	*Rank (only top five)*
Preschool to Eighth Grade Level			
Auditory training	3	2.8	
Career education	2	1.87	
Cognitive development	5	4.67	
Daily living skills	1	0.93	
Health and safety	1	0.93	
Language arts	17	15.89	2
Natural and physical science	2	1.87	
Perceptual/Motor development	1	0.93	
Reading	8	7.48	3.5*
Residential/Dormitory programming	6	5.61	5.5*
Social-Emotional development/ counseling	8	7.48	3.5*
Social science	1	0.93	
Speech training	3	2.80	
Parent/Child programs	19	17.76	1
Ninth to Twelfth Grade Level			
Career education	5	4.67	
Daily living skills	1	0.93	
Health and safety	6	5.61	5.5*
Reading	5	4.67	
Residential/Dormitory programming	5	4.67	
Social-Emotional development/ counseling	5	4.67	
Speech training	1	0.93	
Parent/Child programs	2	1.87	
Total	107	100.00	

* denotes ties in frequencies

Table 9

Comparison of the Five Highest Priority Curriculum Development Needs Among Respondents in Three Program Types

Rank	*State Residential Schools*	*% who Selected*	*Public Schools*	*% who Selected*	*Private Schools*	*% who Selected*
1	Social-Emotional Development/ Counseling: Preschool to eighth grade	53.19	Reading: Preschool to eighth grade	51.52	Parent/Child Programming: Preschool to eighth grade	59.26
2	Career Education: Ninth to twelfth grade	31.91	Social-Emotional Development/ Counseling: Preschool to eighth grade	45.45	Language Arts: Preschool to eighth grade	55.56
3	Residential/Dorm Programming Preschool to eighth grade	29.79	Language Arts: Preschool to eighth grade	39.40	Social-Emotional Development/ Counseling: Preschool to eighth grade	51.85
4	Residential/Dorm Programming: Ninth to twelfth grade	27.66	Parent/Child Programming: Preschool to eighth grade	33.33*	Reading: Preschool to eighth grade	44.44
5	Social-Emotional Development/ Counseling: Ninth to twelfth grade	25.53	Career Education Ninth to twelfth grade	33.33*	Cognitive Development: Preschool to eighth grade	29.63*
					Career Education: Ninth to twelfth grade	29.63*
					Social-Emotional Development/ Counseling: Ninth to Twelfth grade	29.63*

* denotes ties in ranking

Because of the differences in the curriculum, program, and services available at state residential schools as opposed to other types of programs, the curriculum development data were analyzed on the basis of the type of program that interviewees represented. Table 9 compares the five highest priority curriculum development needs as identified from respondents within each of the three program types. Career education and social-emotional development for grades preschool to eighth grade were the only options selected among the top five across all three educational program types. Four of the five top priority items for state residential schools related to non-academic areas; i.e., social-emotional development and counseling, and residential/dormitory programming at both grade levels. It seems clear from the information in Table 9 that the identification of curriculum development priorities for Pre-College Programs will require examining the characteristics of programs that will use its curriculum development products. Although there is some overlap, there are differential needs reflected probably because of the different types of students being served, different philosophical orientations of the programs, and different educational responsibilities perceived for the different program types.

Materials Development

As a means of assessing needs for teaching materials designed specifically for hearing impaired students, respondents were asked to select ten materials development areas from a list of 86 content areas which they felt should be given the highest priority for the development of specially designed student-use or classroom-use materials. Table 10 provides data on the number and percentage of respondents selecting each of the 86 materials development options. Of the 86, the following had a high incidence of selection: reading comprehension skills, vocabulary development skills, math problem solving skills, career exploration, values clarification, functioning in the community, independent living, communication at home, parent-child interaction, and sex education.

Table 11 summarizes the top five materials development areas by program type. The materials development category, as compared to the curriculum development area, indicates greater consensus among the three program types as to their priority needs in materials development. Reading comprehension and problem solving in mathematics were selected among the top five priorities in all three program types. Independent living, communication at home, study/reference skills, values clarification, and functioning in the community were items which were selected by only one of the three program types.

In conjunction with the effort to obtain information on media development priorities, respondents were asked to recommend appropriate media formats for those materials development items. The results of this aspect of the interviews are summarized in Appendix D.

Technical Assistance

In order to assess the needs for technical assistance service to schools and individuals within programs for the hearing impaired, respondents were asked to select from a list of specific content areas in which technical assistance might be provided. This list was divided into three categories: (a) curriculum areas, (b) program areas, and (c) processes. Technical assistance service consisted of evaluation, revision, or development consultation within one of the listed subcategories. Table 12 summarizes the results of responses to the question, "If you could select technical assistance for your school in up to five of the areas below, which would you select?" Ranks based on the frequency items were selected (see Table 10) suggest that (a) parent education, (b) development of curriculum or materials, (c) counseling, (d) diagnostic treatment, and (e) sex education were the five highest areas of need for technical assistance. Other high priority areas were revision of curriculum or materials; residential and dormitory programming; career education; individualizing education; and parent-infant programming.

Inservice Training

Assessment of the inservice training needs within programs for hearing impaired students was approached by asking the following question, "If you could select inservice training programs for your school, which of those listed below would you select? You may select two from each category."

The inservice training content area options were broken into three broad categories: (a) instructional skills, (b) curriculum skills, and (c) interpersonal/

Table 10

Frequency and Percentage of Respondents Selecting Materials Development Categories Among Top Ten Need Areas (* Indicates High Incidence Options)

Materials Development Category	*Number who selected as 1 of 10 most needed*	*% of respondents who selected as 1 of 10 most needed*
Attitudes/Habits	19	17.76
Reading Awareness	9	8.41
Understanding the Reading Process	11	10.28
Study Strategies	27	25.23
Reading Comprehension Skills	*62	57.94
Vocabulary Development Skills	*40	37.38
Word Attack Skills	9	8.41
Writing Awareness	10	9.35
Literary Devices	1	0.93
Understanding Writing Process	16	14.95
Creative Writing	19	17.76
Grammar	30	28.04
Composition	24	22.43
Spelling	6	5.61
Study/Reference Skills	32	29.91
Numbers	1	0.93
Measurement	6	5.61
Operations	3	2.80
Number Theory	2	1.87
Place Value	3	2.80
Problem Solving	*50	46.73
Computation	2	1.87
Algebra	1	0.93
Geometry	3	2.80
Consumer Math	25	23.36
Properties of Matter	2	1.87
Energy	4	3.74
Physics	2	1.87
Geology	0	–
Earth Science	6	5.61
Climatology	0	–
Astronomy	0	–
Chemistry	3	2.80
Ecology	3	2.80
Growth and Reproduction	13	12.15
Biology	7	6.54
Anatomy	3	2.80
Physiology	0	–
Geography	7	6.54
Economics	4	3.74
Sociology/Anthropology	5	4.67
Political Science	1	0.93
History	8	7.48

Table 10 (continued)

Frequency and Percentage of Respondents
Selecting Materials Development Categories Among Top Ten Needs Area
(* Indicates High Incidence Options)

Materials Development Category	*Number who selected as 1 of 10 most needed*	*% of respondents who selected as 1 of 10 most needed*
Religion	2	1.87
Government	15	14.02
Career Exploration	*40	37.38
Interpersonal Skills	33	30.84
Value Clarification	*37	34.58
Job Preparation	29	27.10
Functioning in Community	*38	35.51
Consumerism	19	17.76
Leisure Skills	16	14.95
Independent Living	*36	33.64
Driver's Education	3	2.80
Sewing	1	0.93
Nutrition	4	3.74
Child Care	5	4.67
Home Instruction	15	14.02
Communication at Home	*37	34.58
Parent/Child Interaction	*54	50.47
Behavior Modification	21	19.63
Automotive Technology	1	0.93
Typing	1	0.93
Record Keeping	1	0.93
Keypunch	2	1.87
Printing	0	–
Drafting	1	0.93
Metal Working	0	–
Electricity/Electronics	0	–
Woodworking	2	1.87
Plastics	1	0.93
Sports/Games	2	1.87
Rhythm and Movement	9	8.41
Physical Fitness	3	2.80
Sex Education	*56	52.33
Drug Education	18	16.82
Arts/Crafts	2	1.87
Art Appreciation	2	1.87
Theater/Drama	11	10.28
Dance	5	4.67
Speech Training	15	14.02
Sign Language	14	13.08
Auditory Training	15	14.02
Visual Perception	6	5.61
Public Speaking	2	1.87
Use of Communicative Devices	11	10.28

Table 11

Comparison of the Five Highest Priority Materials Development Needs Among Respondents in Three Program Types

Rank	*State Residential Schools*	*% who Selected*	*Public Schools*	*% who Selected*	*Private Schools*	*% who Selected*
1	Parent/Child Interaction	65.96	Sex Education	66.67	Reading Comprehension	62.96
2	Reading Comprehension	57.45	Reading Comprehension	54.54	Problem Solving (Math)	59.26
3	Sex Education	51.06	Study/Reference Skills	45.45*	rent/Child Interaction	55.56
4	Problem Solving (Math)	40.43*	Problem Solving (Math)	45.45*	alues Clarification	48.15
5	Independent Living	40.43*	Career Exploration	42.42	Career Exploration	40.74*
	Communication at Home	40.43*			Functioning in the Community	40.74*

* denotes tie in ranks

Table 12

Frequency and Percentage of Respondents Selecting Technical Assistance Content Areas as One of the Top Five Need Areas. Rank of the Ten Items with Highest Selection Rank are Indicated.

Technical Assistance Content Area	*Rank (only top 10)*	*Number of respondents who selected item*	*% of respondents who selected item*
Evaluation of Curriculum or Materials		22	20.56
Revision of Curriculum or Materials	7	28	26.17
Development of Curriculum or Materials	2	58	54.21
Minimum Competency/Promotion Policy		14	13.08
Residential/Dormitory	7	28	26.17
Parent/Infant	10	23	21.50
Career Education	7	28	26.17
Open Education		0	—
Total Communication		8	7.48
Preschool		6	5.61
Parent Education	1	63	58.88
Work Study		14	13.08
Drug Education		11	10.28
Sex Education	5	31	28.97
Sign Language		5	4.67
Counseling	3	40	37.38
Diagnostic Assessment	4	33	30.84
Implementation of 94-142		6	5.61
Organizational Renewal/Long-range Planning		14	13.08
Assessment		12	11.21
Supervision/Evaluation		11	10.28
Policies/Procedures		3	2.80
Program Planning		18	16.82
Management Skills		9	8.41
Dissemination		3	2.80
Individualizing Education	9	24	22.43
Monitoring Student Growth		22	20.56

Table 13

Frequency and Percentage of Respondents Selecting Options Within the Instructional Skills Area for Inservice Training

Inservice Training: Instructional Skills Area	*N*	%
Behavior modification	12	11.21
Classroom management	9	8.41
Cognitive skills development	32	29.91
Diagnostic/Prescriptive teaching	22	20.56
Experience-based learning	6	5.61
Individualizing instruction	13	12.15
Integrating affective education in classrooms	12	11.21
Integrating career education into classrooms	25	23.36
Integrating diagnostic information into educational plans	17	15.89
Integrating language development into classrooms	28	26.17
Integrating speech and auditory training into classrooms	14	13.08
Math skills	7	6.54
Record keeping	1	0.93
Team teaching	6	5.61
Use of computer-assisted instruction	3	2.80
Use of media in the classroom	5	4.67

management skills. Tables 13 through 15 summarize the findings relative to inservice training content areas. In Table 13, the number and percentage of respondents who selected options within the instructional skills area of inservice training suggest that high priority areas in this category of inservice training are cognitive skills development; integrating language development into the classroom; integrating career education into the classroom; and diagnostic/prescriptive teaching.

Regarding inservice training within curriculum skills areas (see Table 14), high priority areas were writing educational material for the hearing impaired student; rewriting, revising written material for the hearing impaired student; approaches to curriculum revision; course development; and interdisciplinary programs. Table 15 summarizes the findings from inservice training offerings within the broad area of interpersonal and management skills. Highest priority areas were parent relationships; team building between counselors/resident advisors/teachers; and inservice program development.

Table 14

Frequency and Percentage of Respondents Selecting Options Within the Curriculum Skills Area for Inservice Training

Inservice Training: Curriculum Skills Area	*N*	%
Approaches to curriculum revision	26	24.30
Competency based education	17	15.89
Course development	20	18.69
Developing games	2	1.87
Developing interdisciplinary programs	20	18.69
Developing math skills in young children	3	2.80
Developing programmed instruction	8	7.48
Developing reading appreciation	18	16.82
Evaluating curriculum	14	13.08
Montessori education and the hearing impaired student	12	11.21
Rewriting/Revising written material for the hearing impaired student	28	26.17
Selecting/Evaluating materials	11	10.28
Writing educational material for the hearing impaired student	33	30.84

Table 15

Frequency and Percentage of Respondents Selecting Options Within the Interpersonal/Management Skills Area for Inservice Training Needs

Inservice Training: Interpersonal/Management Skills Areas	*N*	%
Assertiveness training	12	11.21
Conferencing skills	13	12.15
Group dynamics	17	15.89
Inservice program development	36	33.64
Parent relationships	51	47.66
Planning	14	13.08
Project management	4	3.74
Supervision/Evaluation	13	12.15
Team building between counselors/ residence advisors/teachers	50	46.73

Appendix A

STIMULUS QUESTIONS TO RESPONDENTS

Q1

To what extent are the following services currently available to you thru individuals, programs, or agencies other than Pre-college Programs of Gallaudet College? If the service is available, please indicate the degree the service meets the unique needs related to the population of your school?

Respondent _____ Interviewer _____

Service Area	No Services accessible				Full range of services easily accessible	Does not meet my needs at all				Totally meets my needs
Curriculum Development	1	2	3	4	5	1	2	3	4	5
Materials Development	1	2	3	4	5	1	2	3	4	5
Technical Assistance	1	2	3	4	5	1	2	3	4	5
In Service Training	1	2	3	4	5	1	2	3	4	5

Q2A

What five areas of curriculum in your school are most in need of development or modification? Select those five areas in order of priority.

	Pre-school		9 -12
001	☐	Auditory Training	☐
002	☐	Career Education	☐
003	☐	Cognitive Development	☐
004	☐	Daily Living Skills	☐
005	☐	Fine Arts/Drama	☐
006	☐	Health and Safety	☐
007	☐	Language Arts	☐
008	☐	Mathematics	☐
009	☐	Natural and Physical Science	☐
010	☐	Perceptual/Motor Development	☐
011	☐	Physical Education	☐
012	☐	Reading	☐
013	☐	Residential/Dorm Programming	☐
014	☐	Sign Language	☐
015	☐	Social-Emotional Development/Counseling	☐
016	☐	Social Science	☐
017	☐	Speech Training	☐
018	☐	Parent-Child Programs	☐

Q28

If you could select ten(10) content areas which should be given highest priority for the development of teaching materials designed specifically for hearing impaired students, which of these below would you select? REMEMBER YOU CAN ONLY SELECT TEN!

Reading:

- 019 Attitudes Habits
- 020 Reading Awareness
- 021 Understanding the Reading Process
- 022 Study Strategies
- 023 Reading Comprehension Skills
- 024 Vocabulary Development Skills
- 025 Word Attack Skills

Language Arts:

- 026 Writing Awareness
- 027 Literary Devices
- 028 Understanding Writing Process
- 029 Creative Writing
- 030 Grammar
- 031 Composition
- 032 Spelling
- 033 Study Reference Skills

Math:

- 034 Numbers
- 035 Measurement
- 036 Operations
- 037 Number Theory
- 038 Place Value
- 039 Problem Solving
- 040 Computation
- 041 Algebra
- 042 Geometry
- 043 Consumer Math

Science:

- 044 Properties of Matter
- 045 Energy
- 046 Physics
- 047 Geology
- 048 Earth Science
- 049 Climatology
- 050 Astronomy
- 051 Chemistry
- 052 Ecology
- 053 Growth and Reproduction
- 054 Biology
- 055 Anatomy
- 056 Physiology

Social Studies:

- 057 Geography
- 058 Economics
- 059 Sociology Anthropology
- 060 Political Science
- 061 History
- 062 Religion
- 063 Government

Career Education Development:

- 064 Career Exploration
- 065 Interpersonal Skills
- 066 Values Clarification
- 067 Job Preparation

Daily Living Skills:

- 068 Functioning in the Community
- 069 Consumerism
- 070 Leisure Skills
- 071 Independent Living
- 072 Driver's Education
- 073 Sewing

Parent-Child Programs:

- 074 Nutrition
- 075 Child Care
- 076 Home Instruction
- 077 Communication at Home
- 078 Parent-Child Interaction
- 079 Behavior Modification

Occupational Education:

- 080 Automotive Technology
- 081 Typing
- 082 Recordkeeping
- 083 Keypunch
- 084 Printing
- 085 Drafting
- 086 Metal Working
- 087 Electricity/Electronics
- 088 Wood Working
- 089 Plastics

P.E. /Health and Safety:

- 090 Sports/Games
- 091 Rhythm and Movement
- 092 Physical Fitness
- 093 Sex Education
- 094 Drug Education

Fine Arts and Drama:

- 095 Arts/Crafts
- 096 Art Appreciation
- 097 Theatre/Drama
- 098 Dance

Communication:

- 099 Speech Training
- 100 Sign Language
- 101 Auditory Training
- 102 Visual Perception
- 103 Public Speaking
- 104 Use of Communicative Devices

Q3a

The following is a list of possible materials formats. As your interviewer names each of the ten (10) priority areas you identified, please select up to two (2) media formats which are most needed to support each priority area and give the interviewer the number next to it for recording by the interviewer.

A 105	Audio Materials
B 106	Films
C 107	Video Tapes
D 108	Computer Assisted Instruction
E 109	Filmloops
F 110	Filmstrips
G 111	Games, Toys, Puzzles
H 112	Magazines, Specialized Comic Books
I 113	Manipulative Objects, Tools
J 114	Maps, Charts, Pictures, Flashcards
K 115	Models
L 116	Sign Language
M 117	Programmed, Self Instructional Material
N 118	Slides
O 119	Textbooks/Reference Books
P 120	Workbooks, Worktexts, Activity Sheets

Q3B

Respondent's Priority Materials Areas	Media Formats	
_____	1. _____	2. _____
_____	1. _____	2. _____
_____	1. _____	2. _____
_____	1. _____	2. _____
_____	1. _____	2. _____
_____	1. _____	2. _____
_____	1. _____	2. _____
_____	1. _____	2. _____
_____	1. _____	2. _____
_____	1. _____	2. _____

Q 4

If you could select TECHNICAL ASSISTANCE for your school in up to five (5) of the areas below, which would you select?

CURRICULUM

A 105	Evaluation of curriculum or materials
B 106	Revision of curriculum or materials
C 107	Development of curriculum or materials
D 108	Minimum Competency/Promotion Policies

PROGRAMS Evaluation, Revision and/or Development

E 109	Residential/Dormitory
F 110	Parent-Infant
G 111	Career Education
H 112	Open Education
I 113	Total Communication
J 114	Preschool
K 115	Parent Education
L 116	Work Study
M 117	Drug Education
N 118	Sex Education
O 119	Sign Language
P 120	Counseling
Q 121	Diagnostic Assessment
R 122	Implementation of 94-142

PROCESSES Evaluation, Revision or Development

S 123	Organization Renewal/Long Range Planning
T 124	Assessment
U 125	Supervision/Evaluation
V 126	Policies/Procedures
W 127	Program Planning
X 128	Management Skills
Y 129	Dissemination
Z 130	Individualizing Education
AA 131	Monitoring Student Growth

Q5

If you could select IN SERVICE TRAINING programs from your program, which of those listed would you select? Two (2) items in each category

INSTRUCTIONAL SKILLS

A 132	Behavior Modification
B 133	Classroom Management
C 134	Cognitive Skills Development Approaches
D 135	Diagnostic/Prescriptive Teaching
E 136	Experience Based Learning
F 137	Individualizing Instruction
G 138	Integrating Affective Education into Classroom
H 139	Integrating Career Education into Classroom
I 140	Integrating Diagnostic Information into Education Plans
J 141	Integrating Language Development into Classroom
K 142	Integrating Speech and Auditory Training into Classroom
L 143	Math Skills
M 144	Recordkeeping
N 145	Team Teaching
O 146	Use of Computer Assisted Instruction
P 147	Use of Media in the Classroom

CURRICULUM SKILLS

A 148	Approaches to Curriculum Revision
B 149	Competency Based Education
C 150	Course Development
D 151	Developing Games
E 152	Developing Interdisciplinary Programs
F 153	Developing Math Skills in Young Children
G 154	Developing Programmed Instruction
H 155	Developing Reading Appreciation
I 156	Evaluating Curriculum
J 157	Montessori Education and the Hearing Impaired
K 158	Rewriting/Revising Written Material for the Hearing Impaired
L 159	Selecting/Evaluating Materials
M 160	Writing Educational Material for the Hearing Impaired

INTERPERSONAL / MANAGEMENT SKILLS

A 161	Assertiveness Training
B 162	Conferencing Skills
C 163	Group Dynamics
D 164	In-Service Program Development
E 165	Parent Relationships
F 166	Planning
G 167	Project Management
H 168	Supervision/Evaluation
I 169	Team Building Between Counselors/Residence Advisors/Teachers

Appendix B

INVITATION LETTERS

December 7, 1979

Dear _____:

Pre-College Programs of Gallaudet College, which is composed of the Model Secondary School for the Deaf and the Kendall Demonstration Elementary School, recently established a separate unit for the purpose of planning, coordinating, and implementing outreach activities. The Outreach Unit is conducting a needs assessment survey as a means of identifying priority areas for its efforts. The needs assessment project will involve visitations to a number of schools and programs for hearing impaired students to interview key people regarding high priority areas of need. Your program is one which we would like to invite to participate in this survey.

If you agree to participate in the needs assessment survey, two to three Pre-College planning specialists will visit your school for one day to interview individuals regarding high priority need areas. We will be focusing on four broad areas:

(1) curriculum development,
(2) teacher/student materials development,
(3) technical assistance or consultation,
(4) in-service training.

We anticipate that each interview will take between 45 minutes to one hour. We would like to meet with the chief administrative officer, the administrators/supervisors of major sub-components, and selected teachers with a minimum of two years' teaching experience in your program. Depending on the size and organization of your school, we anticipate interviews with five to eight people.

Once all of our interviews have been conducted, we would then like to meet with you to discuss possible areas in which Pre-College Programs and your program may work together. I am enclosing a brochure describing the Affiliated Schools Program, which is one of the mechanisms by which Pre-College extends its resources to other schools. When we meet with you, we would like to discuss the possibility of your program joining the Affiliated Schools Program.

When interviews have been conducted in all of the schools and programs which participate, we will summarize our findings and identify areas in which Pre-College Programs should focus its outreach efforts. We will share this information with you. Hopefully, we can develop a working relationship through which you and others in the field can have direct input to development of outreach efforts.

Attached to this letter is a response form which we would like you to complete and return in the enclosed self-addressed stamped envelope by December 17th. We sincerely hope that you will agree to be one of the participating programs in this needs assessment study. We feel that your program and others in the field will benefit from the information which we hope to gather through this effort. If you do agree to become a participating program, I will contact you to arrange visitation dates for January or February of 1980.

I hope to hear from you soon and look forward to the possibility of meeting with you to discuss ways in which we may work together.

Sincerely,

Norma K. Clark, Ph.D.
Assistant to the Vice President,
Dissemination
(202) 651-5045

Enclosure

TO: Dr. Norma Clark Date:

☐ No, _____ will not be able to participate
name of program

in the Pre-College Programs Needs Assessment Project.

☐ Yes! We would like _____ to participate
name of program

in the Pre-College Programs Needs Assessment Project. The following individuals (chief program administrator, key administrators/supervisors of program components, and experienced classroom teachers representing program components) may be interviewed during the project:

Name	Title	Mailing Address

Dear _____:

Thank you for agreeing to participate in the Pre-College needs assessment survey. As arranged by my secretary, our visitation date is _____.

Ms. Jo Israelson, Mr. Frank Rubin, and/or myself will be arriving at your school by 9:00 A.M. We would appreciate the following arrangements be made prior to our arrival.

1. Please set aside two rooms for our use.

2. We would like the interview situation to be an informal and enjoyable break for your staff. If possible, could provision be made to obtain coffee and tea? We would be more than happy to reimburse you for this expense.

3. The personnel you designated on the response form should be scheduled for individual meetings at one hour intervals. We will have two interviewers, so two staff members can be interviewed each hour.

4. Could you please inform those you have identified to participate of the time and location of their interview?

Also, as we will be arriving in _____ the evening before our visitation, we would appreciate your recommendation for a hotel/motel close to your school.

We look forward to meeting you on _____.

Sincerely,

Norma K. Clark, Ph.D.
Assistant to the Vice President,
Dissemination

NKC/emh

Appendix C

NEEDS ASSESSMENT / AFFILIATED SCHOOL PROGRAM
PROJECT INTERVIEW PROTOCOL

INTRODUCTION

Guidelines:

- Find out something about each interviewee
- Don't second guess interviewee
- Share own background

Procedures:

- Ground interviewee - informal chat regarding their background, day, etc.
- Define PCP - composed of the MSSD and KDES. Both established not only to serve enrollment of students, but to develop curricula, teaching materials, and processes which other schools might adopt for their own use.
- Define ASP - One of the programs by which PCP addresses this outreach responsibility. The ASP is the mechanism by which other schools around the country can join forces with one or both of PCP Programs.
- Explain purpose - to give other schools a voice in decision making for PCP priorities
- Explain process
  - gather information from selected schools
  - summarize information
  - share information with schools and use to define areas of possible assistance
- Lead into questions - We have a series of questions for you to respond to. We would like you to answer them based on your experience as a professional in the field of education of the hearing impaired and based on your knowledge of your school and its particular needs.

  Do you have any questions?

  If not, let's begin.

QUESTION 1 Available Services and How Adequate

Guidelines: - Give interviewees as much time as needed.

Sign/read and let interviewee read all questions and information.

Materials: - Answer sheet

- Four definition cards

Procedures: - Lead in - The first question we would like you to respond to concerns the accessibility and adequacy of four service areas that PCP feels it can offer assistance in.

- Define areas - Read/sign "Curriculum Development" card and then show to interviewee.

- Give example - The development of a topical outline, a set of course objectives, or an identification of appropriate learning materials for a reading program for elementary school students.

- Read/sign "Materials Development" card and then show to interviewee.

- Give example - The creation of an instructional kit which includes learning activities to teach some part of your school's curriculum.

- Read/sign "Technical Assistance" card and then show to interviewee.

- Give example - A cooperative project to help your school implement the rules and regulations of P.L. 94-142.

- Read/sign "In-Service Training" card and then show to interviewee.

- Give example - For PCP to come to your school and give a workshop on writing and re-writing materials for hearing impaired students.

- Give directions - Place answer sheet in front of interviewee. Lead in - First indicate to what degree you have access to these types of services. If you have access to a service area, please indicate to what degree the level of service provided you is adequate. Please read the entire answer sheet before starting. When you are finished, please signal. If you are unclear about what each service area entails, please refer to the definition cards or ask me.

- Wrap-up - Collect answer sheets and store in folder.

QUESTION 2A Curriculum Areas

Guidelines: - Give interviewees as much time as needed.

Sign/read directions.

Materials: - Definition card for Curriculum Development

- Q2A Game Board

- Answer chips with numbers 1 to 5

- Answer sheet

Procedures: - Lead in - This next question asks you to select from a list of 18 curriculum areas, the five curriculum areas you feel need the most attention in your school. You are to select five areas and prioritize them.

- Re-define "Curriculum Development" - The identification and documenting of appropriate skills and knowledge that students should be taught in a given academic area.

- Give directions - Review this list and place answer chips on the curriculum area that corresponds to the level of need you feel is appropriate, either pre-school to eighth grade, or ninth grade to twelfth grade.

When you are satisfied with your selection, let me know and I will record your answers.

- Wrap-up - Record answers and store materials.

QUESTION 2B Materials Development

Guidelines: - Give interviewees as much time as needed.

Sign/read directions.

Materials: - Definition card for Materials Development

- Q2B Game Board

- Ten answer chips

- Answer sheet

Procedures: - Lead in - Our next question concerns your feelings about what kinds of instructional materials are needed in your school.

- Re-define "Materials Development" and show card.

- Give directions - Please review the entire list and then place the ten answer chips next to the content areas you feel are most needed by students in your school.

When you are satisfied with your selection, I will record your answers.

- Wrap-up - Record and store answer sheets and game boards.

QUESTION 3A Media Formats

Guidelines: - Give interviewees as much time as needed.

Sign/read directions.

Materials: - Q3A Game Board

- Answer sheet

Procedures: - Lead in - This next question is related to the one you just answered. Here is a list of the ten content areas you selected. We would like you to indicate which media formats would be most appropriate.

- Give directions - Write the letter and number which corresponds to your selection. Give example. Take as much time as you need to finish.

- Wrap-up - Store answer sheets and game board.

QUESTION 4 Technical Assistance

Guidelines:
- Give interviewees as much time as needed.
- Sign/read all directions.

Materials:
- Definition card for Technical Assistance
- Q4 Game Board
- Five answer chips
- Answer sheet

Procedures:
- Lead in - Another area that Pre-College Programs is interested in obtaining your views on concerns the need for technical assistance in your school.
- Redefine Technical Assistance and show card.
- Give directions - Review this list of possible areas of technical assistance and place a chip on the five areas you feel are most needed by your school. When you are satisfied with your selection, I will record your answers.
- Wrap-up - Store answer sheets and game board.

QUESTION 5 In-Service Training

Guidelines:
- Give interviewees time to finish.

  Read/sign all directions.

Materials:
- Definition card for In-Service Training
- Game Board
- Answer chips
- Answer sheet

Procedures:
- Lead in - The last area of interest is in-service training needs.
- Re-define In-Service Training.
- Give directions - Review this list of possible in-service training programs and select two choices in each category. Select the two areas you feel are most needed at your school. Please indicate when you are satisfied with your selections.
- Wrap-up - Store answer sheets and game boards.

OPEN ENDED QUESTIONS ANSWER SHEET

Date _____

School _____

Interviewer _____

_____

Strengths of their program:

What they would like:

Questions:

Comments:

_____

Strengths of their program:

What they would like:

Questions:

Comments:

_____

Strengths of their program:

What they would like:

Questions:

Comments:

_____

Strengths of their program:

What they would like:

Questions:

Comments:

Appendix D

RECOMMENDED MEDIA FORMATS FOR 86 MATERIALS DEVELOPMENT AREAS:
A Secondary Analysis of the Pre-College Needs Assessment Survey Data

One component of the 1980 Needs Assessment Survey was to identify those content areas in which professionals associated with education of hearing impaired students were highest priority for development. Respondents were offered the chance to select ten options from a list of 86 and, for each of the ten options they selected, were asked to recommend appropriate media format for materials developed in that area. The pages which follow summarize the media format recommendations which derived from this portion of the Needs Assessment Survey. The 86 possible media development choices and the format recommendations which were selected with the first, second, and third highest frequency are listed. As a means of interpreting the data under the percentage column, the number of respondents selecting that format plus the number of respondents selecting that particular materials development choice are indicated. Please note that in the first entry in the set of tables associated with Attitudes and Habits, films were selected by eight of the 19 respondents who selected Attitudes and Habits as one of their ten materials development priority areas.

It is hoped that the information contained in the following pages will provide advice to curriculum developers, teachers, and others involved in the development of educational materials for hearing impaired children.

RECOMMENDED MEDIA FORMATS FOR 86 MATERIALS DEVELOPMENT AREAS:
A SECONDARY ANALYSIS OF THE PRE-COLLEGE NEEDS ASSESSMENT SURVEY DATA

Materials Development Choice	Media Format Choice					
	First Choice	%	Second Choice	%	Third Choice	%
Attitudes and Habits	Films	8/19	*Games/Toys/Puzzles	4/19		
			*Magazines/Specialized Comic Books	4/19		
			*Workbooks/Worktexts/Activity Sheets	4/19		
Reading Awareness	Workbooks/Worktexts/Activity Sheets	4/9	*Magazines/Specialized Comic Books	3/9		
			*Programmed, Self Instructional Material	3/9		
			*Models	3/9		
Understanding the Reading Process	Workbooks/Worktexts/Activity Sheets	5/11	Programmed, Self Instructional Material	4/11	Models	3/11
Study Strategies	Programmed, Self Instructional Material	15/27	Workbooks/Worktexts/Activity Sheets	11/27	Models	6/27
Reading Comprehension Skills	Workbooks/Worktexts/Activity Sheets	32/62	Programmed, Self Instructional Material	29/62	Magazines/Specialized Comic Books	19/62
Vocabulary Development Skills	Workbooks/Worktexts/Activity Sheets	19/40	Programmed, Self Instructional Material	13/40	Games/Toys/Puzzles	9/40
Word Attack Skills	Workbooks/Worktexts/Activity Sheets	7/9	Textbooks/Reference Books	3/9	*Games/Toys/Puzzles	2/9
					*Programmed, Self Instructional Material	2/9

Writing Awareness	Workbooks/Worktexts/ Activity Sheets	6/10	Programmed, Self Instructional Material	5/10	*Magazines/Special-ized Comic Books *Models *Textbooks/Reference Books	2/10 2/10 2/10
Literary Devices	*Programmed, Self Instructional Material *Models	1/1 1/1				
Understanding Writing Process	Workbooks/Worktexts/ Activity Sheets	10/16	Models	7/16	Programmed, Self Instructional Material	6/16
Creative Writing	Films	8/19	Workbooks/Worktexts/ Activity Sheets	5/19	*Sign Language *Magazines/Special-ized Comic Books *Models	4/19 4/19 4/19
Grammar	Workbooks/Worktexts/ Activity Sheets	23/30	Programmed, Self Instructional Material	11/30	Textbooks/Reference Books	9/30
Composition	Workbooks/Worktexts/ Activity Sheets	16/24	Programmed, Self Instructional Material	8/24	Models	5/24
Spelling	Workbooks/Worktexts/ Activity Sheets	3/6	*Games/Toys/Puzzles *Maps/Charts/Pictures/ Flashcards	2/6 2/6		
Study/Reference Skills	*Programmed, Self Instructional Material *Workbooks/Worktexts/ Activity Sheets	16/32 16/32			Textbooks/Reference Books	12/32

Numbers	*Games/Toys/Puzzles	1/1				
	*Programmed, Self Instructional Material	1/1				
Measurement	Manipulative Objects/Tools	4/6	*Filmstrips	2/6		
			*Workbooks/Worktexts/ Activity Sheets	2/6		
Operations	Manipulative Objects/Tools	2/3	*Filmstrips	1/3		
			*Programmed, Self Instructional Material	1/3		
			*Textbooks/Reference Books	1/3		
			*Workbooks/Worktexts/ Activity Sheets	1/3		
Number Theory	Manipulative Objects/Tools	2/2	*Films	1/2		
			*Games/Toys/Puzzles	1/2		
Place Value	Manipulative Objects/Tools	2/3	*Computer Assisted Instruction	1/3		
			*Programmed, Self Instructional Material	1/3		
Problem Solving	*Games/Toys/Puzzles	19/50			Manipulative Objects/Tools	16/50
	*Workbooks/Worktexts/ Activity Sheets	19/50				
Computation	Computer Assisted Instruction	2/2	*Programmed, Self Instructional Materials	1/2		
			*Workbooks/Worktexts/ Activity Sheets	1/2		

(60)

Algebra	*Textbooks/Reference Books	1/1				
	*Workbooks/Worktexts/ Activity Sheets	1/1				
Geometry	*Filmloops	1/3				
	*Filmstrips	1/3				
	*Manipulative Objects/Tools	1/3				
	*Textbooks/Reference Books	1/3				
	*Workbooks/Worktexts/ Activity Sheets	1/3				
	*Models	1/3				
Consumer Math	Workbooks/Worktexts/ Activity Sheets	11/25	*Computer Assisted Instruction	5/25		
			*Games/Toys/Puzzles	5/25		
			*Programmed, Self Instructional Material	5/25		
Properties of Matter	Manipulative Objectives/Tools	2/2	*Films	1/2		
			*Workbooks/Worktexts/ Activity Sheets	1/2		
Energy	*Manipulative Objectives/Tools	2/4			*Video Tapes	1/4
	*Textbooks/Reference Books	2/4			*Filmstrips	1/4
					*Workbooks/Worktexts/ Activity Sheets	1/4
Physics	*Manipulative Objects/Tools	1/2				
	*Models	1/2				
	*Textbooks/Reference Books	1/2				
	*Workbooks/Worktexts/ Activity Sheets	1/2				

Geology							
Earth Science	*Films	2/6					
	*Textbooks/Reference Books	2/6					
	*Workbooks/Worktexts/ Activity Sheets	2/6					
Climatology							
Astronomy							
Chemistry	*Films	1/3					
	*Filmloops	1/3					
	*Models	1/3					
	*Textbooks/Reference Books	1/3					
	*Workbooks/Worktexts/ Activity Sheets	1/3					
Ecology	*Video Tapes	1/3					
	*Filmloops	1/3					
	*Filmstrips	1/3					
	*Models	1/3					
	*Slides	1/3					
	*Textbooks/Reference Books	1/3					
Growth and Reproduction	Films	8/13	Models	5/13	Filmstrips	4/13	
Biology	Models	3/7	*Textbooks/Reference Books	2/7			
			*Workbooks/Worktexts/ Activity Sheets	2/7			

Anatomy	Programmed, Self Instructional Material	2/3	*Films	1/3
			*Computer Assisted Instruction	1/3
			*Filmstrips	1/3
			*Models	1/3
Physiology				
Geography	Maps/Charts/Pictures/ Flashcards	6/7	*Films	2/7
			*Textbooks/Reference Books	2/7
			*Workbooks/Worktexts/ Activity Sheets	2/7
Economics	Workbooks/Worktexts/ Activity Sheets	2/4	*Video Tapes	1/4
			*Filmloops	1/4
			*Magazines/Specialized Comic Books	1/4
			*Manipulative Objects/Tools	1/4
			*Maps/Charts/Pictures/Flashcards	1/4
			*Textbooks/Reference Books	1/4
Sociology/ Anthropology	Magazines/Specialized Comic Books	3/5	*Films	1/5
			*Games/Toys/Puzzles	1/5
			*Models	1/5
			*Programmed, Self Instructional Material	1/5
			*Textbooks/Reference Books	1/5
			*Workbooks/Worktexts/ Activity Sheets	1/5
Political Science	*Filmstrips	1/1		
	*Magazines/Specialized Comic Books	1/1		

History	Textbooks/Reference Books	5/8	Films	4/8	Video Tapes	3/8
Religion	*Models	1/2				
	*Programmed, Self Instructional Material	1/2				
	*Textbooks/Reference Books	1/2				
Government	*Textbooks/Reference Books	5/15			Films	4/15
	*Workbooks/Worktexts/ Activity Sheets	5/15				
Career Exploration	Films	24/40	Manipulative Objects/Tools	12/40	*Video Tapes	8/40
					*Magazines/Specialized Comic Books	8/40
Interpersonal Skills	*Films	13/33			Games/Toys/Puzzles	12/33
	*Video Tapes	13/33				
Values Clarification	Films	15/37	Video Tapes	12/37	*Games/Toys/Puzzles	8/37
					*Models	8/37
Job Preparation	*Films	10/29			Manipulative Objectives/Tools	9/29
	*Programmed, Self Instructional Material	10/29				
Functioning in the Community	Films	20/38	Video Tapes	9/38	*Models	8/38
					*Workbooks/Worktexts/ Activity Sheets	8/38
Consumerism	Workbooks/Worktexts/ Activity Sheets	8/19	Manipulative Objects/Tools	6/19	Games/Toys/Puzzles	4/19

Leisure Skills	*Games/Toys/Puzzles	4/16		
	*Manipulative Objects/Tools	4/16		
	*Textbooks/Reference Books	4/16		
Independent Living	Programmed, Self Instructional Materials	10/36	*Films	8/36
			*Video Tapes	8/36
			*Manipulative Objects/Tools	8/36
			*Workbooks/Worktexts/ Activity Sheets	8/36
Driver's Education	*Films	1/3		
	*Video Tapes	1/3		
	*Maps/Charts/Pictures/Flashcards	1/3		
	*Models	1/3		
	*Slides	1/3		
	*Workbooks/Worktexts/ Activity Sheets	1/3		
Sewing	*Manipulative Objects/Tools	1/1		
	*Models	1/1		
Nutrition	*Films	2/4	*Filmstrips	1/4
	*Games/Toys/Puzzles	2/4	*Magazines/Specialized Comic Books	1/4
			*Maps/Charts/Pictures/Flashcards	1/4
			*Textbooks/Reference Books	1/4
Child Care	Films	4/5	*Video Tapes	1/5
			*Filmstrips	1/5
			*Magazines/Specialized Comic Books	1/5
			*Manipulative Objects/Tools	1/5
			*Programmed, Self Instructional Material	1/5
			*Workbooks/Worktexts/	1/5

Home Instruction	*Films	4/15				
	*Video Tapes	4/15				
	*Programmed, Self Instructional Material	4/15				
Communication at Home	Sign Language	19/37	Video Tapes	12/37	Models	11/37
Parent/Child Interaction	Video Tapes	22/54	Games/Toys/Puzzles	14/54	Films	13/54
Behavior Modification	Models	9/21	Films	9/21	Video Tapes	6/21
Automotive Technology	*Films	1/1				
	*Manipulative Objects/Tools	1/1				
Typing	*Programmed, Self Instructional Material	1/1				
	*Workbooks/Worktexts/ Activity Sheets	1/1				
Recordkeeping	*Films	1/1				
	*Games/Toys/Puzzles	1/1				
Keypunch						
Printing						
Drafting	*Manipulative Objects/Tools	1/1				
	*Workbooks/Worktexts/ Activity Sheets	1/1				
Metal Working						
Electricity/ Electronics						

Wood Working	Manipulative Objects/Tools	2/2	Films	1/2		
Plastics	Manipulative Objects/Tools	1/1				
Sports/Games	Games/Toys/Puzzles	2/2	*Films *Workbooks/Worktexts/ Activity Sheets	1/2 1/2		
Rhythm and Movement	Films	5/9	*Audio Materials *Models	4/9 4/9		
Physical Fitness	*Games/Toys/Puzzles *Magazines/Specialized Comic Books *Manipulative Objects/Tools *Programmed, Self Instructional Material	1/3 1/3 1/3 1/3				
Sex Education	Films	24/56	*Textbooks/Reference Books *Workbooks/Worktexts/ Activity Sheets	17/56 17/56		
Drug Education	Films	11/18	Workbooks/Worktexts/ Activity Sheets	7/18	*Video Tapes *Magazines/Specialized Comic Books	4/18 4/18
Arts/Crafts	Models	2/2	*Video Tapes *Textbooks/Reference Books	1/2 1/2		
Art Appreciation	*Films *Computer Assisted Instruction *Slides	1/2 1/2 1/2				

Theatre/Drama	Films	7/11	Video Tapes	4/11	Models	3/11
Dance	Films	5/5	*Audio Materials	2/5	*Video Tapes	2/5
Speech Training	Models	6/16	*Audio Materials *Video Tapes *Games/Toys/Puzzles	4/15 4/15 4/15		
Sign Language	Video Tapes	10/14	*Films *Programmed, Self Instructional Material	3/14 3/14		
Auditory Training	Audio Materials	6/15	*Games/Toys/Puzzles *Models *Textbooks/Reference Books	4/15 4/15 4/15		
Visual Perception	*Manipulative Objects/Tools *Workbooks/Worktexts/ Activity Sheets	3/6 3/6			Games/Toys/Puzzles	2/6
Public Speaking	Video Tapes	2/2	*Audio Materials *Workbooks/Worktexts/ Activity Sheets	1/2 1/2		
Use of Communicative Devices	Manipulative Objects/Tools	8/11	Workbooks/Worktexts/ Activity Sheets	3/11	*Filmstrips *Programmed, Self Instructional Material *Textbooks/Reference Books	2/11 2/11 2/11